

t33_tex_1 (TM-
FyG4Wnc6UxbkMnCNQf5SNdC34zpcCRjrC)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_tdlat_3 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_tops_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_tops_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow ((v3_tops_1 X1 X0) \Leftrightarrow (\exists X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \wedge ((r1_tarski X1 X2) \wedge ((v4_pre_topc X2 X0) \wedge (\\ v2_tops_1 X2 X0))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v3_tdlat_3 X0) \Leftrightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg v3_tops_1 X1 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v4_pre_topc \\ X1 X0) \wedge (v2_tops_1 X1 X0)) \Rightarrow (v3_tops_1 X1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow ((\neg(\neg v3_tdlat_3 X0) \wedge (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow (\neg(v2_tops_1 \\ & X1 X0) \wedge (v4_pre_topc X1 X0))) \wedge (\neg(\exists X1.((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \wedge ((v2_tops_1 \\ & X1 X0) \wedge (v4_pre_topc X1 X0))) \wedge (v3_tdlat_3 X0)) \end{aligned}$$